

## **ABSTRACT**

In synchronizing data across a database, time-dependent and time-constrained data may be synchronized, using grouping value(s) that may themselves be time-dependent.

When a time constraint prohibits data timelines from exhibiting time gaps, data included in the timeline may be mapped to a directed graph. In this way, any time gaps may be filled by extending data records that precede the gap(s), and this operation may be reflected in a coloring of the directed graph. Then, recursive processing may be performed using the directed graph, so as to account for any unanticipated effects of the extended data records.

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